

## **REMARKS/ARGUMENTS**

Reconsideration of the application, as herein amended, is respectfully requested.

### **Status of Claims**

Claims 1, 2 and 4-25 are pending in the application, with claims 1 and 23 being the only independent claims. Claim 25 has been added. Support for claim 25 can be found, for example, in Fig. 2 and paragraph [0056] of the published version of the specification.

### **Overview of the Office Action**

Claims 1, 2, 4-12, 15, 19, 20, 23 and 24 stand rejected under 35 U.S.C. §102(a) as anticipated by WO 01/59895 (*Paschotta*).

Claims 13, 14, 16-18, 21 and 22 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Paschotta*.

Claim 25 has been rejected under 35 U.S.C. §103(a) as unpatentable over *Paschotta* in view of *Chilla*.

### **Summary of Subject Matter Disclosed in the Specification**

The following descriptive details are based on the specification. They are provided only for the convenience of the Examiner as part of the discussion presented herein, and are not intended to argue limitations which are unclaimed.

The specification discloses a laser device for generating laser pulses with an optically pumped semiconductor laser. The laser device includes a semiconductor laser having an active layer; a first pump radiation source which is monolithically integrated into the semiconductor

laser; an external resonator; and at least one mode-locker. The active layer is optically pumped by the monolithically integrated first pump radiation source. *See, e.g.*, Fig. 2; and paragraphs [0055] to [0058] of the published version of the specification (US Patent Application Publication No. 2004/0190567).

### **Allowability of the Claims**

#### **Independent Claim 1**

In the amendment filed April 23, 2007 Applicants submitted that claim 1 is not anticipated by *Paschotta* because *Paschotta* fails to disclose, either expressly or inherently, each and every element set forth in claim 1. In particular, *Paschotta* fails to disclose or teach the limitation that an active layer is optically pumped by a monolithically integrated first pump radiation source, as expressly recited in claim 1.

On page 2 of the Final Rejection, the Examiner states that the laser device of *Paschotta* includes:

"a first pump radiation source which is monolithically integrated into the semiconductor laser (*It is inherent and known in the art that semiconductor laser device gain/active/quantum well layer are driven via the electrodes integrate into the semiconductor cause semiconductor to lase*)".

On page 8 of the Final Rejection, the Examiner states:

"The Examiner stands, the radiation emission is the result from a first electrical pump source, in this case, is the source that lased many semiconductor devices".

At the bottom of page 8 of the Final Rejection, the Examiner states:

"The claim does not distinct from the reference as how or what the monolithically integrated first pump radiation source is."

In other words, according to the Examiner's interpretation, the laser device of *Paschotta* has electrodes for lasing the active layer (3), and such electrodes qualify as a monolithically integrated first pump radiation source.

Moreover, the Examiner contends that claim 1 does not specify "how or what" this pump radiation source is in such a way as to be distinguishable over *Paschotta*.

Applicants respectfully disagree.

Firstly, as explained in the last-filed Amendment, *Paschotta* does not disclose or teach that its laser device has electrodes for the active layer (3). Thus, the Examiner's entire position must crumble for lack of support. The Examiner has not substantively responded to this argument!

Secondly, even if the laser device of *Paschotta* were to have electrodes, they could not qualify as the claimed first pump radiation source. Such electrodes do not emit radiation when energized; rather, they merely inject current into the active layer (3). It is well-known that in such a setting, the active layer (3) would be electrically pumped by the current. Thus, the active layer (3) in *Paschotta* is not optically pumped by a monolithically integrated first pump radiation source, as is required by applicants' independent claim 1.

The Examiner's response to this argument is to allege that claim 1 does not specify "how or what" the pump radiation is in such a way as to distinguish it over the use of electrodes in *Paschotta*. However, the term "pump radiation source" is, of course, structurally descriptive of a source of pump radiation. Stated another way, the source emits radiation which is used to pump the active layer. Thus, the very term "pump radiation source" means a device that emits radiation. If this structure were compared to electrodes, the distinction is readily apparent because an electrode is not a device that itself emits radiation.

Accordingly, *Paschotta* fails to teach or disclose the limitation that an active layer is optically pumped by a monolithically integrated first pump radiation source, as is expressly recited in claim 1.

Notwithstanding this distinction, claim 1 has been further modified to facilitate prosecution of the present application. Specifically, claim 1 recites "a first pump radiation source which is monolithically integrated into the semiconductor laser and configured to optically pump said active layer". This leaves absolutely no room for disputing that the claimed source is an optical source, not an electrode.

In view of these differences, withdrawal of the rejection under 35 U.S.C. §102(a) of claim 1 is respectfully requested.

Moreover, in view of the above-discussed fundamental differences between claim 1 and the prior art of record, claim 1 is clearly patentable under 35 U.S.C. 103(a) as well.

#### Dependent Claims 2, 4-22 and 25

Each of claims 2, 4-22 and 25 depends, directly or indirectly, from independent claim 1, and as such benefits from its allowability. In addition, these claims include additional limitations which serve to still further distinguish the claimed invention over the prior art of record. Thus, these dependent claims are allowable.

#### Independent Claim 23 and Dependent Claim 24

Independent claim 23 recites, *inter alia*, "said phase compensation element compensating for group velocity dispersion." Thus, claim 23 does not merely recite a phase compensation

element; rather, it recites a phase compensation element that compensates for group velocity dispersion.

In the last-filed Amendment, arguments were presented to clearly show that claim 23 is not anticipated by *Paschotta* because *Paschotta* fails to disclose, either expressly or inherently, each and every element set forth in claim 23. In particular, *Paschotta* fails to teach or disclose a phase compensation element which compensates for group velocity dispersion, as applicants recite in independent claim 23.

Unfortunately, the Examiner has completely failed to address this argument!

To repeat, applicants submit that claim 23, and claim 24 which depends from claim 23, are neither anticipated nor rendered obvious by *Paschotta* or by any of the other art of record in this case for reasons presented in the last-filed Amendment. The Examiner is respectfully requested to consider these arguments. Should the rejection be maintained, then an explanation by the Examiner is required, and is respectfully requested

### **Conclusion**

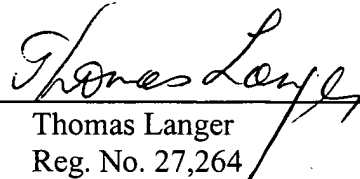
Based on the foregoing, applicants respectfully submit that the present application is now in full and proper condition for allowance. Prompt and favorable action to this effect, and early passage of this application to issue, are once more solicited.

Should the Examiner have any comments, questions, suggestions or objections, he is respectfully requested to telephone the undersigned in order to facilitate an early resolution of any outstanding issues.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any such fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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